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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/693,881	10/28/2003	Takashi Kubo	244640US0	4046
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OBLON, SPIVAK, MCCLELLAND, MAIER & NEUSTADT, P.C. 1940 DUKE STREET ALEXANDRIA, VA 22314				
EXAMINER RONESI, VICKEY M				
ART UNIT		PAPER NUMBER		
1714				

DATE MAILED: 08/17/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/693,881

Applicant(s)

KUBO ET AL.

Examiner

Vickey Ronesi

Art Unit

1714

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 02 June 2005.
2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-5 and 9-13 is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5) ☐ Claim(s) _____ is/are allowed.
6) ☒ Claim(s) 1-5 and 9-13 is/are rejected.
7) ☐ Claim(s) _____ is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

1. Claims 1-5 and 9-13 are now pending in the application.
2. All outstanding rejections are withdrawn in light of applicant's amendment filed 6/2/2005.
3. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior office action.
4. The new grounds of rejection set forth below are necessitated by applicant's amendment filed on 6/2/2005. In particular, claim 1 has been amended to recite the titanium compound from original claim 8 and a limitation that raw material of the polyester is polycondensed in the presence of both the titanium compound catalyst and inorganic phosphorus compound. This combination of limitations was not present in the original claims. Thus, the following action is properly made final.

Claim Objections

5. Claim 1 is objected to because, as written, it has not been made immediately clear that both the titanium catalyst and the phosphorus compound are to be present during the polycondensation of the polyester. As now written, the claim could be interpreted as a composition comprising two ingredients, a product derived from raw material and a titanium catalyst *and*, separately, a phosphorus compound. It is recommended that the claim read as follows: "A polyester resin composition for a toner comprising the product of condensing raw material monomers in the presence of 0.005 to 4 % by weight of a titanium compound catalyst and 0.001 to 50 % by weight of an inorganic phosphorus compound, wherein the titanium

Art Unit: 1714

compound catalyst is [titanium compound catalyst definition].” In the interest of compact prosecution, claim 1 has been interpreted as polycondensing the raw material in the presence both titanium and phosphorus compounds.

Appropriate correction is required.

Claim Rejections - 35 USC § 102

6. Claims 1-3, 12, and 13 are rejected under 35 U.S.C. 102(b) as being anticipated by Barkey (US 4,217,440).

Barkey discloses branched polyesters used in electrographic toners (col. 10, line 3) prepared by polycondensing a diol such as $\text{RO}-\text{R}^1-\text{OR}^2$ (col. 8, lines 18-56) and diacids such as succinic acid (col. 8, line 57 to col. 9, line 31) in the presence of 0.01-0.1% titanium catalyst (col. 6, lines 51-68) and 0.1-0.5% deactivator such as phosphoric acid (col. 7, lines 15-40). Note col. 7, lines 9-14 where the deactivator is utilized not only added at the end of polycondensation but also utilized to reduce the effectiveness of high reactive catalysts.

In light of the above, it is clear that Barkey anticipates the presently cited claims.

7. Claims 1-3, 9, and 13 are rejected under 35 U.S.C. 102(b) as being anticipated by Kawase et al (US 3,953,539).

Kawase et al discloses a polyester resin composition that is prepared by polycondensing the raw monomer materials (e.g., bisphenol A) (col. 2, line 28 to col. 3, line 3) with a titanium catalyst (col. 3, lines 7-20) and an inorganic phosphorus compound (col. 3, lines 31 to col. 4, line

Art Unit: 1714

55). Note col. 4, lines 61-65 where Kawase et al discloses that the phosphorus compound is added to raw material for preparing polyester.

In light of the above, it is clear that Kawase et al anticipates the presently cited claims.

8. Claims 1-5 and 13 are rejected under 35 U.S.C. 102(b) as being anticipated by Harazoe et al (US 5,519,112).

Harazoe et al discloses polyesters prepared by polycondensing raw materials in the presence of a titanium alkoxide catalyst such as titanium tetrabutoxide (col. 5, lines 1-6, 27-41) and 0.0001-0.1 wt % inorganic phosphorus compounds such as polyphosphoric acid (col. 5, lines 7-16, 42-46). Note that polyphosphoric acid has at least two phosphate groups, giving a molecular weight of at least 177 g/mol.

In light of the above, it is clear that Harazoe et al anticipates the presently cited claims.

9. Claims 1-3 and 13 are rejected under 35 U.S.C. 102(b) as being anticipated by Adams et al (US 5,681,918).

Adams et al discloses copolyesters prepared by polycondensing esterified raw materials in the presence of 10-60 ppm of a titanium catalyst (col. 3, lines 38-53) and 10-100 ppm of a phosphorus stabilizer (col. 3, lines 54-60).

In light of the above, it is clear that Adams et al anticipates the presently cited claims.

Claim Rejections - 35 USC § 103

10. Claims 1-3, 12, and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Barkey (US 4,217,440) in view of Schiraldi (US 5,922,828).

Claims 1-3, 9, and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kawase et al (US 3,953,539) in view of Schiraldi (US 5,922,828).

Claims 1-5 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Harazoe et al (US 5,519,112) in view of Schiraldi (US 5,922,828).

Claims 1-3 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Adams et al (US 5,681,918) in view of Schiraldi (US 5,922,828).

The discussions with respect to Barkey, Kawase et al, Harazoe et al, and Adams et al in paragraphs 6-9 above, respectively, are incorporated here by reference.

While each one of Barkey, Kawase et al, Harazoe et al, and Adams et al is open to the use of any suitable alkoxytitanium catalyst, each one fails to explicitly disclose an amino-modified titanium.

Schiraldi discloses a polyester composition and the use of a titanium catalyst and teaches well-known alkoxytitanium catalysts, including amino-substituted titanium compounds (col. 5, lines 5-26).

Given that amino-substituted titanium catalysts for polyester condensation are known in the art and further given that no surprising or unexpected result is obtained by using an amino-substituted titanium catalyst, it would have been obvious to one of ordinary skill in the art to utilize such a conventional catalyst as taught by Schiraldi and thereby arrive at the presently cited claims.

Art Unit: 1714

11. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over any one of Barkey (US 4,217,440), Kawase et al (US 3,953,539), Harazoe et al (US 5,519,112) or Adams et al (US 5,681,918) or any of which also in view of Schiraldi (US 5,922,828).

The discussions with respect to Barkey, Kawase et al, Harazoe et al, and Adams et al in paragraphs 6-10 above are incorporated here by reference.

While none of the aforementioned references disclose a preferred softening point of its polyester composition, it is considered that it would have been well within the capabilities of one of ordinary skill in the art to control the processing conditions to obtain any suitable softening point range, including that presently claimed, for a desired end use and thereby arrive at the presently claimed invention.

12. Claims 9 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Barkey (US 4,217,440) in view of Yamamoto et al (US 5,637,427) or Barkey (US 4,217,440) in view of Schiraldi (US 5,922,828) and further in view of Yamamoto et al (US 5,637,427).

The discussion with respect to Barkey in paragraphs 6 and 10 above is incorporated here by reference.

Barkey discloses generically discloses the use of a bisphenol as a diol and the use of succinic acid as an exemplary diacid in making its polyester, however, it does not disclose the use of bisphenol A and an alkenyl-substituted succinic acid.

Yamamoto et al discloses toner and teaches that a polyester derived from ethoxylated bisphenol type diols (col. 8, lines 9-37) and alkenyl-substituted succinic acids (col. 8, line 61 to col. 9, line 4) provides for a toner with improved pulverizing properties, powder properties,

Art Unit: 1714

preservability, fixing properties at low temperatures, impact resistance, and surface lubricating properties (col. 9, lines 5-21).

Since Yamamoto et al teaches the benefits by using particular raw materials in polycondensing a polyester and given that Barkey is already open to the use of a diol such as bisphenol A and a diacid such as succinic acid, it would have been obvious to one of ordinary skill in the art to utilize the raw materials taught by Yamamoto et al in Barkey and thereby arrive at the presently cited claims.

Response to Arguments

13. Applicant's arguments filed 6/2/2005 have been fully considered but they are not persuasive. Specifically, applicant argues that since Schiraldi does not disclose the combination of a tetra-substituted titanium catalyst and an inorganic phosphorus compound, that the instant claims cannot be rendered obvious over the cited prior art. With respect to the argument, while Schiraldi does not disclose the use of inorganic phosphorus compounds, Schiraldi is utilized for its teachings regarding conventional titanium catalysts (e.g., amino-substituted titanium catalysts) for polyester condensation and thus it is not necessary for this secondary reference to contain all the features of the presently claimed invention, *In re Nievelt*, 482 F.2d 965, 179 USPQ 224, 226 (CCPA 1973), *In re Keller* 624 F.2d 413, 208 USPQ 871, 881 (CCPA 1981). Rather this reference teaches a certain concept, and in combination with the primary reference, discloses the presently claimed invention. If the secondary reference contained all the features of the present claimed invention, it would be identical to the present claimed invention, and there would be no need for secondary references.

Conclusion

14. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Contact Information

15. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Vickey Ronesi whose telephone number is (571) 272-2701. The examiner can normally be reached on Monday - Friday, 8:30 a.m. - 5:00 p.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vasu Jagannathan can be reached on (571) 272-1119. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications

Art Unit: 1714

may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

8/11/2005

vr



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